Claims

[c1]   1.A method for monitoring and controlling a microscope, comprising the following steps:

a)ascertaining the information content of at least one image;

b)analyzing the information content using a specified target information content and a specified variation of the information content as the tolerance dimension;

c)determining a control variable from the analysis of the information content, using a predetermined target value for influencing the information content;

d)transferring the control variable to at least one actuator of the microscope; and

e)outputting a warning signal in the event of variations of the information content beyond the tolerance dimension.

[c2]   2.The method as defined in Claim 1, wherein depending on the result of the analysis of the information content, several different control variables and actuators of the microscope are determined and activated.

[c3]   3.The method as defined in Claim 1, wherein the method for monitoring and controlling the microscope is initi-

ated by a user.

[c4] 4.The method as defined in Claim 3, wherein the method is started by the user by means of a switch.

[c5] 5.The method as defined in Claim 1, wherein the microscope is embodied as a scanning microscope.

[c6] 6.An arrangement for monitoring and controlling a microscope, comprising:

-a detector unit for acquiring at least one image,

-at least one input port for a control variable,

-a computer system associated with the microscope, wherein the information content of the at least one image can be ascertained using the detector unit and the computer system; the computer system analyzes the information content using a specified target information content and a specified variation of the information content as the tolerance dimension, and determines a control variable therefrom; from the analysis of the information content, using a predetermined target value for influencing the information content; and

-at least one actuator associated with the microscope, wherein the actuator converts the control variable allocated to the actuator into a change in the information content of the image within a tolerance dimension.

[c7]   7.The arrangement as defined in Claim 6, wherein a means for outputting a warning signal is provided, which means makes a warning signal available to the user if the variations in the information content lie outside the tolerance dimension.

[c8]   8.The arrangement as defined in Claim 6, wherein several actuators are associated with the microscope, each of which receives a different control variable.

[c9]   9.The arrangement as defined in Claim 6, wherein a switch is provided with which a user initiates the automatic monitoring of the microscope.

[c10]   10.The arrangement as defined in Claim 6, wherein the switch is embodied as a click button on a display associated with the computer system.

[c11]   11.The arrangement as defined in Claim 6, wherein the microscope is embodied as a scanning microscope.

[c12]   12.Software on a data medium,
        wherein a computer system connected to a microscope carries out a method comprising the steps:
        a)ascertaining the information content of at least one image;
        b)analyzing the information content using a specified target information content and a specified variation of

the information content as the tolerance dimension;

c)determining a control variable from the analysis of the information content, using a predetermined target value for influencing the information content;

d)transferring the control variable to at least one actuator of the microscope; and

e)outputting a warning signal in the event of variations of the information content beyond the tolerance dimension.